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**PATENT**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:

Serial No.: 09/844,677

Patent No.:

4/30/01

Date Filed:

Issued Date:

Title: Gas Distribution Structures and  
Gas Diffusion Electrodes for Polymer  
Electrolyte Fuel Cells

February 11, 2002

Assistant Commissioner for Patents  
Washington, D.C. 20231

**TRANSMITTAL OF ASSOCIATE POWER OF ATTORNEY**

Sir:

Enclosed is an Associate Power of Attorney for the above-identified patent application. It is respectfully requested that the enclosed Associate Power of Attorney be entered into the file for the matter identified above and that the identified attorneys of Kalow & Springut LLP be established as the attorneys of record with all the powers described.

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Respectfully submitted,

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Attorney for Applicant(s)

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I hereby declare that this correspondence is being deposited with the United States Postal Service as first class mail in an envelop addressed to:  
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Date: 2/11/02 Name: J. Caldwell



PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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**ASSOCIATE POWER OF ATTORNEY**

SIR:

The undersigned agent, being an Agent of Record for the referenced patent applications and issued patents in attached appendix A, hereby appoints David A. Kalow, Reg. No. 29,397; Milton Springut, Reg. No. 27,721; John J. Santalone, Reg. No. 32,794; J. David Ellett, Jr., Reg. No. 27,875; Gary Molnar, Reg. No. 30,299; Scott D. Locke, Reg. No. 44,877; William D. Schmidt, Reg. No. 39,492; Tor E. Smeland, Reg. No. 43,131; and Sylvia Chiou, Reg. No. 47,324, each of them c/o KALOW & SPRINGUT LLP, 488 Madison Avenue, 19th Floor, New York, NY, 10022, as Associate Attorneys with full power of substitution and revocation, to prosecute these patents and patent applications listed in attached appendix A, to make amendments and alterations therein, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please address all future communications to:

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Date

January 25, 2002

by

Respectfully submitted,

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Registration No. 20,531  
Agent for Applicant

# Appendix A

Serial No.	Patent No.	Inventors	Title	Date Filed	Date Issued
09/852151			Honeycomb body of ceramic material with improved radial compressive strength		
09/844677			Gas distribution structures and gas diffusion electrodes for polymer electrolyte fuel cells		
09/813933			Method for the partial coating of a supporting body	03/22/01	
09/566981			Method for catalytic conversion of carbon monoxide in a gas mixture containing hydrogen, with improved cold start behavior and catalyser for same	05/09/00	
09/850410			Method for the removal of nitrogen oxides and soot particles from lean exhaust gas of a combustion engine and emission control system for same		
09/838119			Method and catalytic converter for reduction on nitrogen oxides		
09/878174			Process for manufacturing plates and expanded metal grids from refractory metals coated on one side with platinum		
60/213246			Process for manufacturing plates and expanded metal grids from refractory metals coated on one side with platinum		
09/832332			Method for checking the functional serviceability of a nitrogen oxide storage catalytic converter in various temperature ranges	04/11/01	
09/568814			Method for catalytic conversion of carbon monoxide in a gas mixture containing hydrogen	05/11/00	
09/910959			Precious metal-nanoparticle, method for its manufacture and use		
09/832301			Process for the preparation of a vanadia SCR-catalyst supported on titania	04/11/01	
09/853902			Method for autothermal, catalytic vapour-free formation of hydrocarbons	05/20/00	
09/855743			Method for operating an emission control device in a spark-ignition engine		
09/931162			Oxygen-storing material based on cerioxide, method for its manufacture and use		

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Serial No.	Patent No.	Inventors	Title	Date Filed	Date Issued
09/907961			Membrane electrode unit for polymer electrolyte fuel cells and method for its manufacture		
09/927885			Method for the manufacture of a metal composite membrane, metal composite membranes manufactured in that way and its use		
09/973193		Kohler, et al.	Method for the manufacture of a membrane electrode unit for fuel cells		
09/977253		Beller, et al.	Palladium complexes and their use in the manufacture of biarylenes		
09/978792		Singer, et al.	Method for the manufacture of tubular structural parts with radial wave-shaped cambers, made from PGM materials		
09/985954		Pfeifer, et al.	Emission control system for the selective catalytic reduction of nitrogen oxides under lean exhaust gas conditions and method of emission control		
60/268718			Three-dimensional, catalytic converter nets knitted in two or three layers for gas reactions	02/15/01	
06/415635	4450244	Domesle, et al.	Catalyst for the combustion of harmful substances contained in exhaust gases of internal combustion engines operated with alcohol and process for the production of the catalyst	09/07/82	05/22/84
06/434806	4455393	Domesle, et al.	Catalyst for reducing the ignition temperature of diesel soot and process for making the catalyst	10/18/82	06/19/84
06/542313	4477417	Domesle, et al.	Catalyst for reducing the ignition temperature of diesel soot	10/14/83	10/16/84
06/521292	4515758	Domesle, et al.	Process and catalyst for the reduction of the ignition temperature of diesel soot filtered out of the exhaust gas of diesel engines	08/08/83	05/07/85
06/709261	4588707	Domesle, et al.	Catalyst for the reduction of the ignition temperature of diesel soot filtered out of the exhaust gas of diesel engines	03/07/85	05/13/86
07/147603	4828807	Domesle, et al.	Method for the purification of exhaust gas from diesel motors	01/22/88	05/09/89
07/248355	4900517	Domesle, et al.	Apparatus for the purification of exhaust gas from diesel motors	09/23/88	02/13/90
07/105366	4749594	Malikowski, et al.	Method for coating surfaces with hard substances	10/07/87	06/07/88
07/263701	5013705	Koberstein, et al.	Platinum-free three-way catalyst	10/28/88	05/07/91

Serial No.	Patent No.	Inventors	Title	Date Filed	Date Issued
07/263695	5001103	Koberstein, et al.	Rhodium-free three-way catalyst	10/28/88	03/19/91
07/559095	5073532	Domesle, et al.	Catalyst for purifying exhaust gases from internal combustion engines and method of making the catalyst	07/30/90	12/17/91
07/738434	5127960	Dittrich, et al.	Method for removing washcoat remaining in the channels of freshly coated monolithic or honeycombed catalyst carriers	07/31/91	07/07/92
07/305396	5070893	Dittrich, et al.	Apparatus and method for removing washcoat remaining in the channels of freshly coated monolithic or honeycombed catalyst carriers and use of the apparatus	02/02/89	12/10/91
07/376579	4980243	Malikowski, et al.	Direct bonding of ceramic parts by a silver alloy solder	07/07/89	12/25/90
07/402619	5045521	Lox, et al.	Catalyst for the purification of exhaust gases of internal combustion engines with reduction of hydrogen sulfide emission	09/05/89	09/03/91
07/345721	4963521	Engler, et al.	Exhaust-gas catalyst with reduced tendency to store sulfur oxides and to emit hydrogen sulfide and process for preparing the catalyst	05/01/89	10/16/90
07/404949	4987112	Engler, et al.	Catalyst to eliminate noxious substances contained in the exhaust gases of predominantly alcohol fueled internal combustion engines, a process for its preparation, and uses	09/05/89	01/22/91
07/471486	5024985	Koberstein, et al.	Support material for three-way catalysts containing platinum group metal and having reduced tendency for H <sub>2</sub> S emission	01/29/90	06/18/91
07/510266	5043311	Engler, et al.	Monolithic or honeycomb-type catalyst	04/19/90	08/27/91
07/556097	5120695	Blumrich, et al.	Catalyst for purifying exhaust gases from internal combustion engines and gas turbines operated at above the stoichiometric ratio	07/23/90	06/09/92
07/928050	5514354	Domesle, et al.	Method for using a catalyst to purify exhaust gases from a diesel engine	08/11/92	05/07/96
07/667211	5157007	Domesle, et al.	Catalyst for purification of exhaust gases of diesel engines and method of use	03/11/91	10/20/92
07/661313	5165970	Schmidt, et al.	Method of coating honeycomb bodies with finely divided solid matter	02/27/91	11/24/92
07/658280	5179059	Domesle, et al.	Catalyst for purifying the exhaust gases of internal combustion engines and method for making the catalyst	01/31/91	01/12/93
07/658476	5139993	Schmidt, et al.	Method of improving the thermal shock behavior of monolithic catalysts	01/31/91	08/18/92

Serial No.	Patent No.	Inventors	Title	Date Filed	Date Issued
07/851020	5268157	Blass, et al.	Process for the production of catalytic gas permeable nets and process for oxidizing ammonia	03/13/92	12/07/93
08/017058	5496788	Domesle, et al.	Coating dispersion for exhaust gas catalysts	02/12/93	03/05/96
08/016,572	5958929	Bacon et al.	6-aryl pyrazolo [3,4-D] pyrimidin-4-ones and compositions and methods of use thereof	1/30/98	09/28/99
08/026127	5354720	Leyrer, et al.	Reduction in the quantity of NO <sub>x</sub> in lean exhaust gas of motor vehicle engines	03/04/93	10/11/94
08/102784			Method for catalytic emission control using improved cold start method	08/06/93	
08/115001	5352542	Voelcker, et al.	Use of silver alloys as cadmium-free brazing solder	09/01/93	10/04/94
08/283919	5531962	Weise, et al.	Cadmium-free silver alloy brazing solder, method of using said solder, and metal articles brazed with said solder	08/03/94	07/02/96
08/114615	5341981	Weise, et al.	Use of a cadmium-free silver alloy as brazing solder (III)	09/01/93	08/30/94
08/130132	5446006	Domesle, et al.	Monolithic catalyst with a metal carrier	10/04/93	08/29/95
08/226048	5431745	Koschlig, et al.	Solder suspension for the application of thin layers of solder to substrates	04/11/94	07/11/95
08/273742	6299835	Weise, et al.	Cadmium-free silver alloy as low-melting brazing filler material	07/12/94	10/09/01
08/277631	5534129	Hoffacker, et al.	Cyanidic-alkaline baths for the galvanic deposition of copper-tin alloy coatings, uses thereof, and metallic bases coated with said copper-tin alloy coating	07/20/94	07/09/96
08/413943	5628925	Domesle, et al.	Process for manufacturing a coated, monolithic metal support	03/30/95	05/13/97
08/542124	5643542	Leyrer, et al.	Process for simultaneously reducing the amounts of hydrocarbons, carbon monoxide and nitrogen oxides contained in the exhaust gas from an internal combustion engine	10/12/95	07/01/97
08/498060	5707574	Domesle, et al.	Method for the unilateral or bilateral sealing or filling of flow channels in an annular zone of a cylindrical honeycomb body	07/05/95	01/13/98
08/324140	5489563	Brand, et al.	Platinum alloy catalyst for fuel cells and method of its production	10/17/94	02/06/96
08/594143	5798468	Weise, et al.	Sintering material containing silver-tin oxide for electrical contacts and process for its manufacture	01/31/96	08/25/98

Serial No.	Patent No.	Inventors	Title	Date Filed	Date Issued
08/892104	5900386	Freund, et al.	Shell catalysts, processes for their preparation and their use	07/14/97	05/04/99
08/624806	5620583	Kuhn, et al.	Platinum plating bath	03/27/96	04/15/97
08/828146	6073467	Blass, et al.	Catalyst gauzes for gaseous reactions	03/24/97	06/13/00
08/646394	5767036	Freund, et al.	Platinum-aluminum alloy catalyst for fuel cells and method of its production and use	05/08/96	06/16/98
08/698857	5730931	Poniatowski, et al.	Heat-resistant platinum material	08/16/96	03/24/98
08/751935	5841044	Weise, et al.	Silver-iron material for electrical switching contacts (I)	11/19/96	11/24/98
08/723549	5852768	Jacobsen, et al.	Process for producing precious metal powders	09/30/96	12/22/98
08/822864	5861222	Fischer, et al.	Gas diffusion electrode for membrane fuel cells and method of its production	03/24/97	01/19/99
08/838846	5928981	Leyrer, et al.	Diesel catalytic converter	04/11/97	07/27/99
08/751934	5728194	Weise, et al.	Silver-iron material for electrical switching contacts (III)	11/19/96	03/17/98
08/806725	5985440	Weise, et al.	Sintered silver-iron material for electrical contacts and process for producing it	02/27/97	11/16/99
09/180112	6220022	Muller, et al.	Catalyst system for the treatment of exhaust gases from diesel engines	08/04/99	04/24/01
09/043416	6165342	Kuhn, et al.	Cyanide-free electroplating bath for the deposition of gold and gold alloys	06/02/98	12/26/00
08/996215	6001318	Tillaart, et al.	Process for lowering nitrogen oxide levels in combustion engine exhaust gas	12/22/97	12/14/99
09/056641	6180075	Lindner, et al.	Exhaust gas catalyst	04/08/98	01/30/01
09/080468	6007934	Auer, et al.	Co-tolerant anode catalyst for PEM fuel cells and a process for its preparation	05/19/98	12/28/99
09/340407			Co-tolerant anode catalyser for PEM fuel cells and method for its manufacture	06/28/99	
09/070784			Emission control system for diesel engines	05/01/98	
09/078597	5934073	Gieshoff, et al.	Auxiliary heating for motor vehicles with internal combustion engines	05/14/98	08/10/99
09/578703			Emission control catalytic converter with improved conversion of hydrocarbons	05/26/00	
08/967984	6080375	Mussmann, et al.	Exhaust gas purification catalyst with improved hydrocarbon conversion	11/12/97	06/27/00
08/987061	5984161	Koch, et al.	Flux-encased resilient solder preforms and process for the preparation thereof	12/08/97	11/16/99

Serial No.	Patent No.	Inventors	Title	Date Filed	Date Issued
09/055908	6103660	Yperen, et al.	Method of depositing catalytically active components on high-surface area support materials	04/07/98	08/15/00
09/056795			Oxygen-storing material with high temperature stability and method for its production	04/08/98	
09/381269	6207300	Koch, et al.	Soldering paste for producing geometrical metal structures with precise contours	12/08/99	03/27/01
09/227589	6171565	Hohne, et al.	Process for the operation of a nitrogen oxides storage catalyst	01/08/99	01/09/01
09/345787			Catalytic converter for the reduction of nitrogen oxides in oxidizing and reducing atmospheres	07/01/99	
09/078415	6089015	Strehlau, et al.	Method of purifying a lean exhaust gas and catalytic system therefor	05/14/98	07/18/00
09/115553			Brazing paste for coating and brazing of aluminum and aluminum alloys	07/15/98	
09/100251			Emission control catalytic converter for combustion engines with two catalytically-active layers on a supporting body	06/19/98	
09/276131	6145303	Strehlau, et al.	Process for operating an exhaust gas treatment unit containing a sulfur trap and a nitrogen oxides storage catalyst	03/25/99	11/14/00
09/159235	6117301	Freudenberger, et al.	Electrolyte for the galvanic deposition of low-stress, crack-resistant ruthenium layers	09/23/98	09/12/00
09/205280			Method for the production of a catalytic converter	12/04/98	
09/212474	6077489	Klein, et al.	Oxidation catalyst for internal combustion engines	12/16/98	06/20/00
09/299630	6238525	Lox, et al.	Process for reducing the nitrogen oxides content of exhaust gas from an internal combustion engine	04/27/99	05/29/01
09/824185			Process for manufacturing powdery heterogeneous materials	04/03/01	
09/309504	6228292	Foerster, et al.	Process for the preparation of pulverulent heterogeneous substances	05/11/99	05/08/01
60/105392			Process for manufacturing powdery heterogeneous materials	10/23/98	
09/529972			Hard solder paste, free of fluxing agent	09/02/98	
09/442633			Catalytic converter for emission control of a diesel engine	11/18/99	
08/859853			Method of making metallic powders by aerosol thermolysis	05/21/97	



Serial No.	Patent No.	Inventors	Title	Date Filed	Date Issued
09/493288			Use of gas discharge components for the generation of ammonia with the aim of NO <sub>x</sub> reduction in lean exhaust gas	1/28/00	
09/757581			Use of gas discharge components for the generation of ammonia with the aim of NO <sub>x</sub> reduction in lean exhaust gas	1/11/01	
09/859680			Method for obtaining electrical energy with the aid of a fuel cell	05/18/01	
09/274018	6309772	Zuber, et al.	Membrane-electrode unit for polymer electrolyte fuel cells and processes for their preparation	03/22/99	10/30/01
09/289604	6146782	Wendt, et al.	Fuel cell anode for the oxidation of methanol	04/12/99	11/14/00
09/276903			Storage material for sulphur oxide	03/26/99	
09/146436	6149973	Foerster, et al.	Process for the coating of the flow channels of a honeycomb form catalytic converter carrier with a dispersion coating	09/03/98	11/21/00
09/851417			Structured catalytic converter for the selective reduction of nitrogen oxides by means of ammonia using a compound which can be hydrolyzed to ammonia	05/09/01	
09/288075	6216449	Strehlau, et al.	Process for evaluating performance deterioration of a nitrogen oxide storage catalyst	04/08/99	04/17/01
08/804515	5916128	Garr, et al.	Sound deadening and catalyst treating system	02/21/97	06/29/99
60/099661			Nitrogen oxide storage material and the nitrogen oxide storage catalytic converter produced therefrom	09/09/98	
09/378693			Nitrogen oxide storage material and the nitrogen oxide storage catalytic converter produced therefrom	08/23/99	
09/376438	6156449	Zuber, et al.	Catalyst layer for polymer electrolyte fuel cells	08/18/99	12/05/00
09/377157			Method for coating the flow channels of a monolithic catalytic converter with a coating dispersion	08/19/99	
09/418556	6165635	Auer, et al.	Pt/Rh/Fe alloy catalyst for fuel cells and a process for producing the same	10/14/99	12/26/00
09/340197			Method for applying electrode coatings on a ribbon-shaped polymer electrolyte membrane	06/28/99	
09/648343			Electrocatalyser for fuel cells	8/25/00	
09/513341			Catalytic converter material and method and its manufacture	02/25/00	

Serial No.	Patent No.	Inventors	Title	Date Filed	Date Issued
09/576069			Method and device for the removal of soot from the exhaust gas of a diesel engine	05/22/00	
09/643876			Cadmium-free brazing alloys		
09/565482			Flux for brazing difficult-to-wet metal workpieces	05/05/00	
09/409744	6294140	Mussmann, et al.	Layered noble metal-containing exhaust gas catalyst and its preparation	10/01/99	09/25/01
09/413878			Catalyser for vapour-free formation of alcohols	10/7/99	
09/693835			Method for plasma-catalytic generating of ammonia	10/23/00	
09/842321			Method for the removal of nitrogen oxides from an exhaust gas flow containing oxygen	04/26/01	
09/809355			Method for checking the functional serviceability of an exhaust gas catalytic converter	03/16/01	
09/818998			Single layer high performance catalyst	03/28/01	
09/789718			Catalytic converter for emission control of diesel engines and method for its manufacture	02/22/01	
09/825363			Method for the manufacture of composite powders based on silver-tin oxide and their use in the manufacture of materials for contacts		
09/712186			Method for the production of nitrogen oxide storage material and the storage material produced therewith	11/15/00	
09/745,176		Linder et al.	Emission control catalytic converter for mounting close to engines and method for its manufacture		
09/745176			Method for coating a ceramic honeycomb body	12/22/00	
09/915764			Ink for the production of membrane electrode units for PEM fuel cells		

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